

ABSTRACT

A holographic recording and reproducing apparatus 10 can simultaneously reproduce a plurality of data images by the single application of a reproduction reference beam in 5 reproducing holograms. In the holographic recording and reproducing apparatus 10, an object beam is projected from a fixed object beam incident optical axis 18A to a holographic recording medium 16, and a reference beam is incident on the holographic recording medium 16 selectively from a plurality 10 of incident optical axes 38A to 38C by modulating the angle of a rotating mirror 32 in many stages. A rotating stage 36 rotates the holographic recording medium 16 in such a manner that the holographic recording medium 16 has a constant angle with respect to the reference beam selectively incident 15 thereon via each incident optical axis 38A, 38B, or 38C. When reproducing data images, the projection of a single reference beam generates a plurality of diffracted light beams in different directions in response to the rotational angle of the holographic recording medium 16 at the time of recording, 20 and three imaging devices 22A, 22B, and 22C simultaneously receive the diffracted light beams.